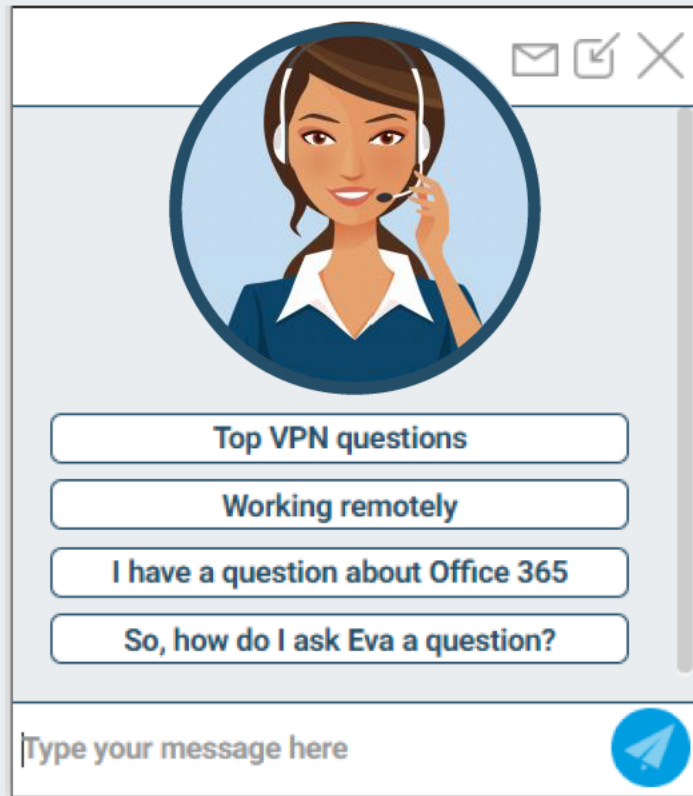




Artificial Intelligence & Eva

December 9, 2020 | 11:00-12:00 p.m.

Mike Amato, Olive Kilpatrick, Jeff Martinson & Justin Stiles

AGENDA

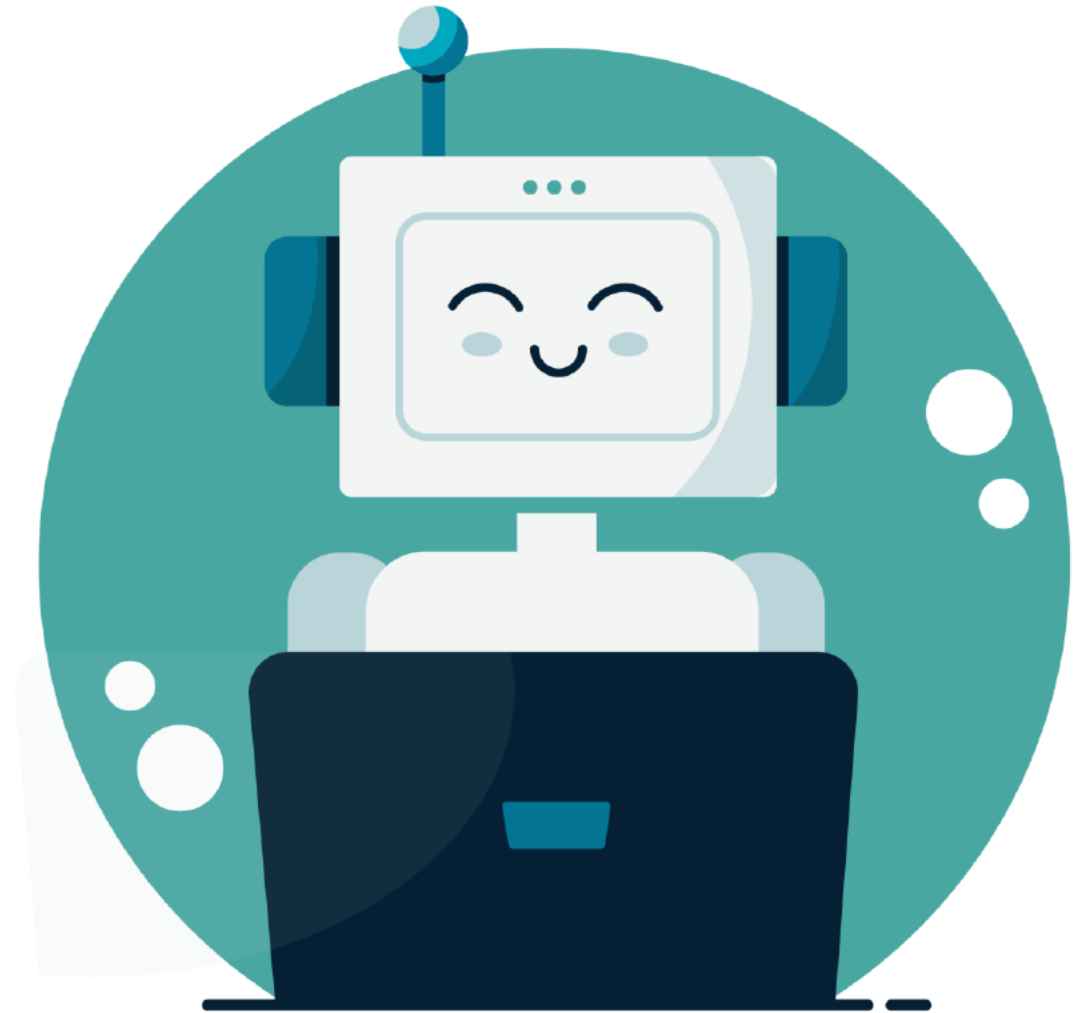


Time	Topic	Presenter
11:00-11:10	Welcome and Introduction	Monica Sharma , Senior Manager, OCCIO, TORU, MGCS Mike Amato , Director, Process and Operations Branch, ITS
11:10-11:55	Eva background, development, improvements and questions	Mike Amato , Director, Process and Operations Branch, ITS Justin Stiles , Sr. Manager, Service Operations, ITS Jeff Martinson , Manager, OPS IT Service Desk, ITS Olive Kilpatrick , I&IT Service Operations Team Lead, ITS
11:55-12:00	Closing Remarks	Monica Sharma , Senior Manager, OCCIO, TORU, MGCS

What is a chatbot?

Chatbots are software that can perform automated tasks, such as answering Frequently Asked Questions or simple requests.

Chatbots live online in chat platforms and usually improve over time by using artificial intelligence (AI) and machine learning.



Beginning the Chatbot Journey with LiveChat

LiveChat is a digital initiative that was piloted in the OPS. LiveChat allows two-way interaction between OPS customers and the OPS IT Service Desk.

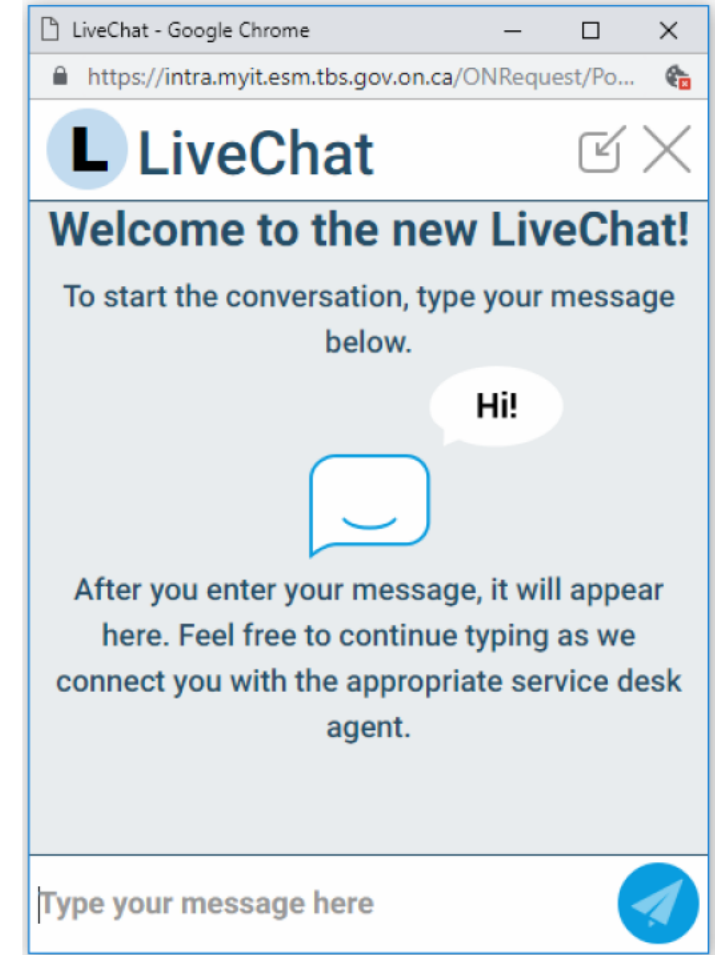
GOAL: Provide an additional channel of support to OPS employees who are seeking assistance from the OPS IT Service Desk.



Client satisfaction survey, 97% reported overall ease of use.



Greater than 10,000+ LiveChats from the pilot group.



View of pilot LiveChat window

Introducing Eva, the Enterprise Virtual Assistant

In **April 2020**, the Ontario Public Service (OPS) introduced Eva, an artificial intelligence (AI) chatbot to help support the OPS IT Service Desk. By Adding AI to our Service Desk, we've automated frequently asked questions/issues and freed up Service Desk Agents for higher priority calls.

In November 2020, Eva was augmented to support Human Resources (HR)/ Labour Relations (LR) frequently asked questions. Once launched, new content will be added on an ongoing basis.



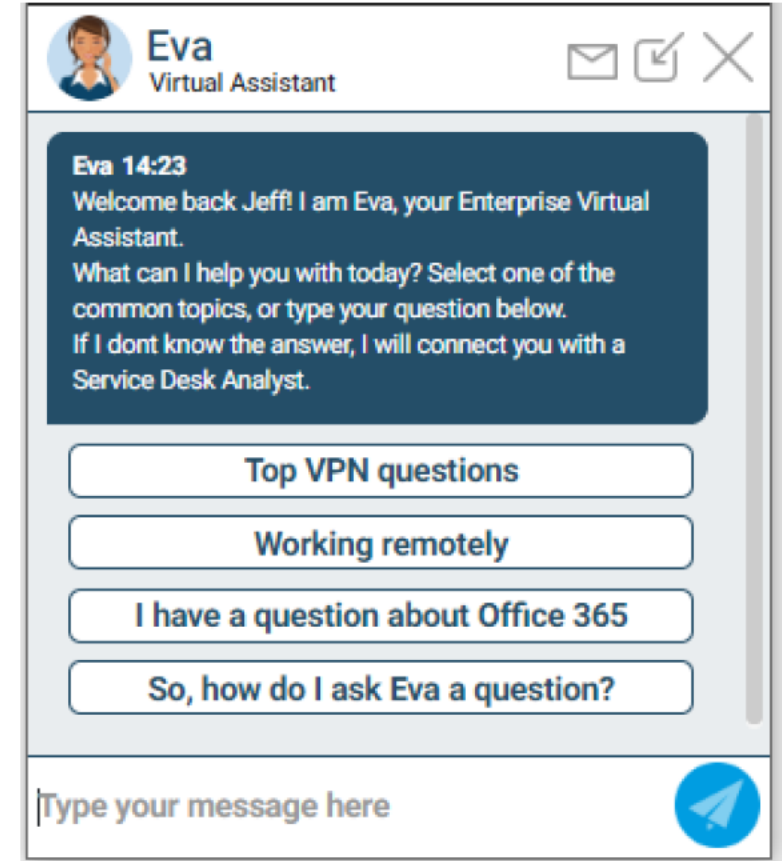
10.3K+ interactions with staff since April 2020 with a 30.4% call deflection rate



Reducing load on service desk while still providing a great user experience for users who need support

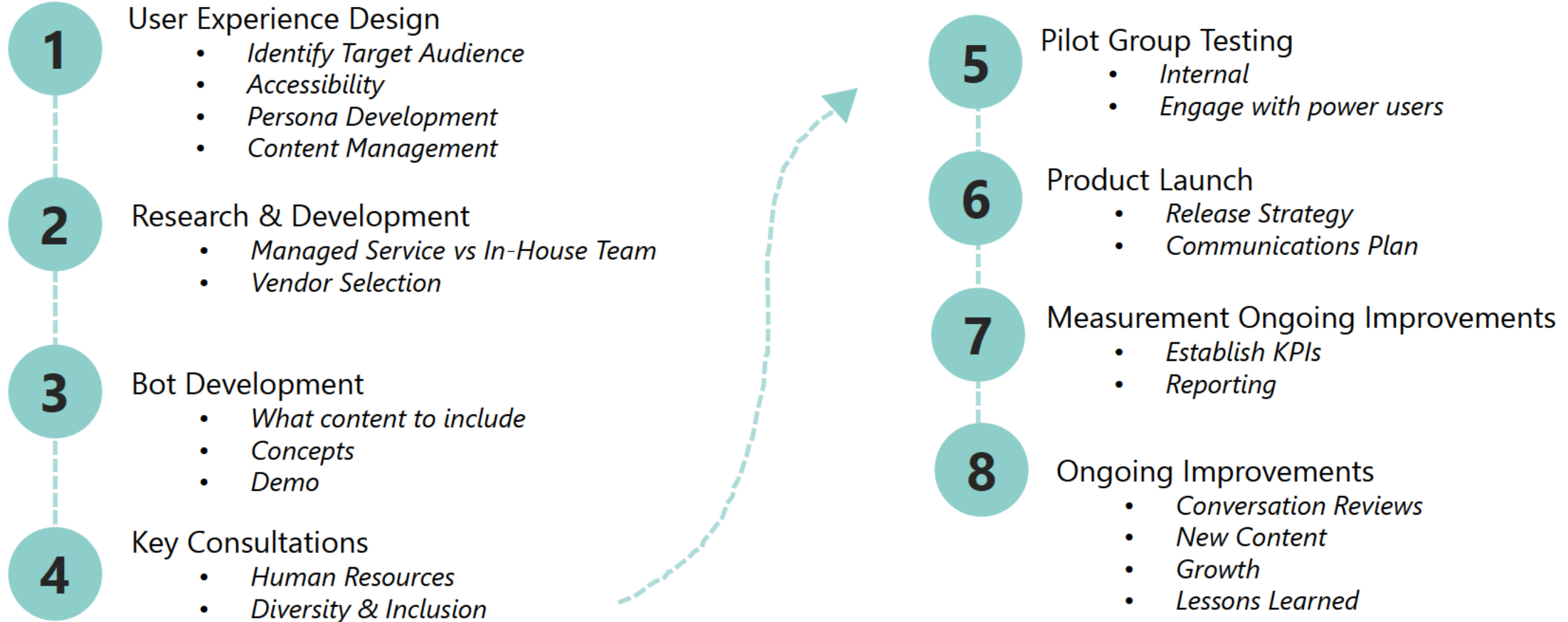


Has assisted with employee transition to remote work as a result of COVID-19





Creating a Chatbot



1 User Experience Design



Decisions to Make

- Formal or Informal?
- Official or Casual?
- Male or Female?
- Neutral or Robot?
- Friendly or Professional?
- How many words is too many?
- Immediate or paused responses?



Things to Think About

- Who are the intended customers?
- How is the service provided now?
- What are the existing guidance/rules
- AODA Compliance



Consultations

- MGCS Communications
- Diversity & Inclusion Office
- Ontario Digital Services
- Ontario Shared Services
- Ministry of Transportation
- Ministry of Finance
- ServiceOntario
- Enterprise Digital Services Integration Division
- Ministry of Training, Colleges and Universities

1 User Experience Design (continued)

What's in a name?

- Over 100 names were considered for our chatbot
- A gender-neutral name was agreed upon (Onya), which was later abandoned after feedback from various stakeholders
- Eva (Enterprise Virtual Assistant) was agreed after multiple "naming workshops" and finalized after our partner groups gave their feedback & endorsement



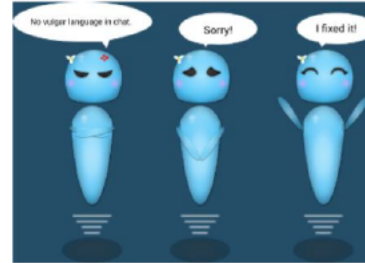
1 User Experience Design (continued)

Create a bio for your chatbot:

- What is their role in the organization?
- What is their personality?
- What is their style?
- What are their job goals?
- How will they respond to questions?

Eva

Age: 25
Work: Service Desk Analyst
Location: Cloud
Character: Service Desk Analyst



End User Support Bridge the Gap
Customer Service
First point of Contact
Enjoys helping others Fun

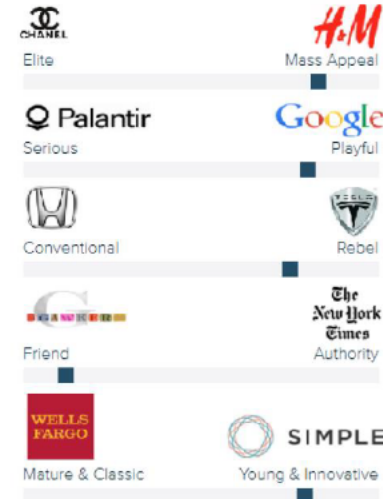
Bio

Eva has been with the service desk for a year. She prides herself on providing amazing customer service. She enjoys volunteering in hospitals, making silly faces for the patients there to make them smile. Her favourite movie is Wall-E. She hopes that she does a good job. Her primary goals at work are to be helpful and put a smile on peoples' faces.

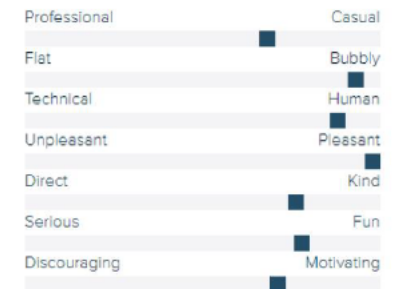
Goals

- Help the clients get what they need
- Provide a pleasant and excellent customer service experience
- Able to resolve at first point of contact
- Provide meaningful informed responses for issues like order times, eta, and status updates
- Educating client to make them self-sufficient
- Bridging the gap between the technical and end user

Relate-able Brand



Personality Spectrum



Quotes

"Hi! I am Eva, the OPS Virtual Assistant."

"Oh no! Unfortunately, I have not learned about that issue yet. Let me transfer you over to a Live Agent right away."

"I can help you with that!"

"I hope you have a FANTASTIC day!"

"Almost 100GB of emails?! Wow, that's a lot! No problem, you can always move your mail to the online mail archive. Would you like some step-by-step instructions on how to do this?"

2

Research & Development



Decisions to Make

Vendor Selection

- Consulted with Gartner (Magic Quadrant)
- Demo of IPsoft's Amelia
- Tried Microsoft QnA Maker

Managed Service vs In-House Development

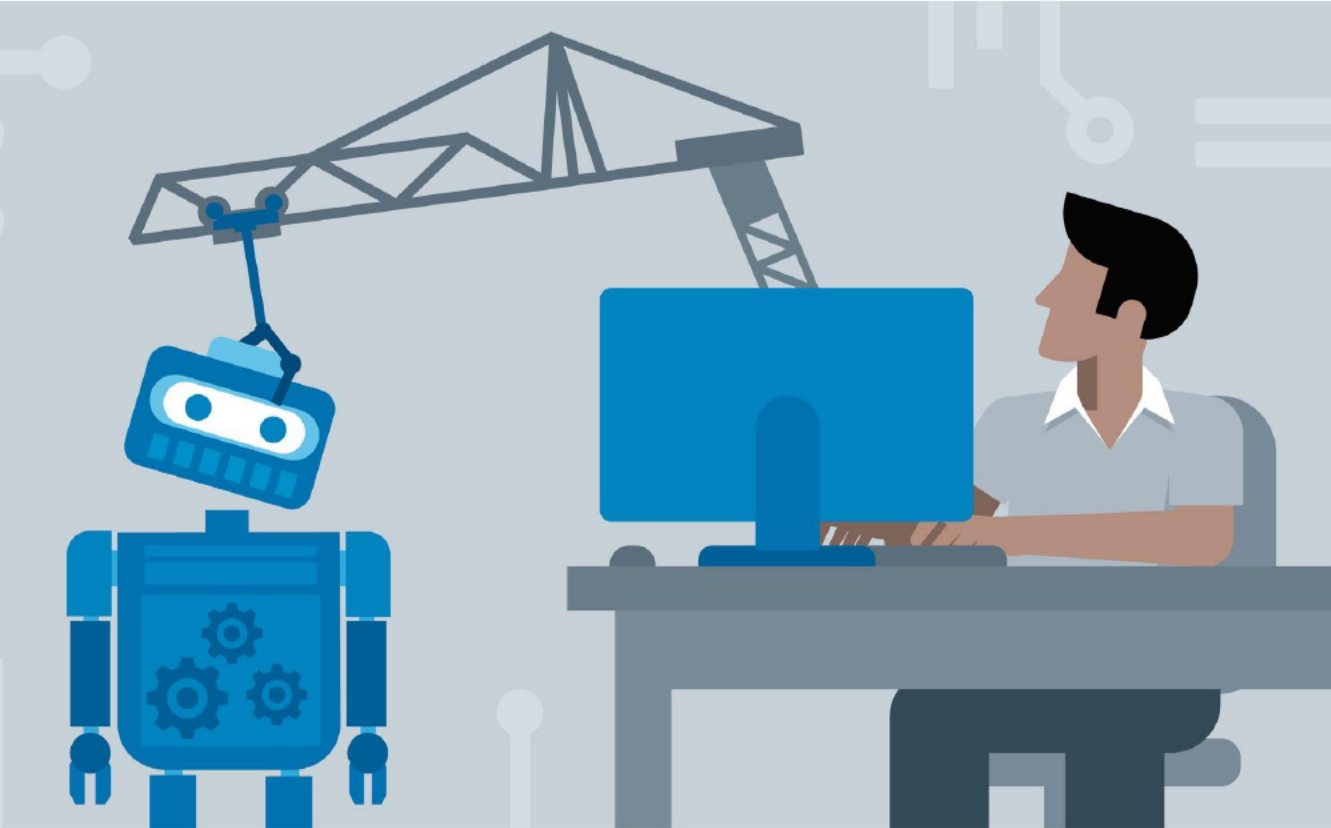
- Proof of Concept managed service
- Evaluated and decided to go with in-house team trained by IBM



Things to Think About

- Who are your users?
- Is there research on best practices for build?
- Accessibility?
- What are the intended benefits?

3 Chatbot Development – What content to include



Analysis of call volume

- What topics drive the most calls

Evaluation

- Which topics are suitable for the bot?
 - Don't require an agent to answer
 - We have answers for
 - Answers are short
 - Requires agent, but we can gather upfront data to speed up contact

Automation opportunities

- What do we have access to automate
- Can we get access?

3 Bot Development – Concepts



MYTH: Load up the bot with information and you are done!

New Concepts:



Disambiguation

- The chatbot interprets questions asked with high confidence to two possible answers
- Controlled by the bot



Auto-Learning (beta feature)

- The chatbot learns from disambiguation choices over time
- Increases confidence for one answer over the other

5 Pilot Groups & Testing

Various groups included in the testing process:

IT:

- Internal team leads and managers
- Broader ITS community

Non-IT:

- Office 365 Champions
- 2,500 existing LiveChat users

Testing was primarily done to ensure the chatbot could give the answers we expected.



Bonus: Also provided early insights into user behaviour and different ways of asking the same question.



6 Launch



Have a plan

Plan, plan & plan some more, but be prepared to change at the last minute – you never know when a pandemic might strike.

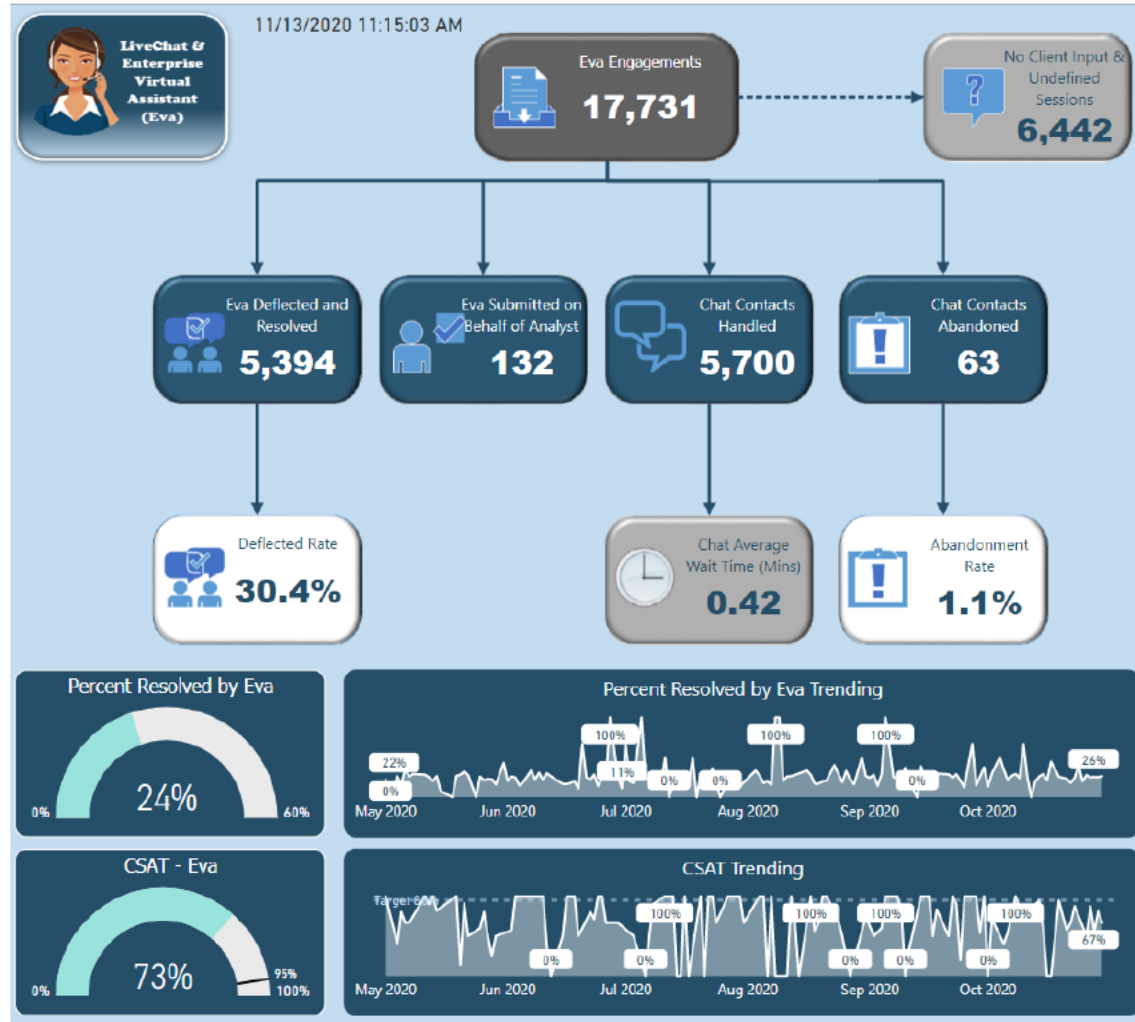
Be flexible

Eva was originally going to launch ministry by ministry over a period of several months, but quickly shifted to a “big bang” launch to help support the quick shift to remote work.

Get the word out

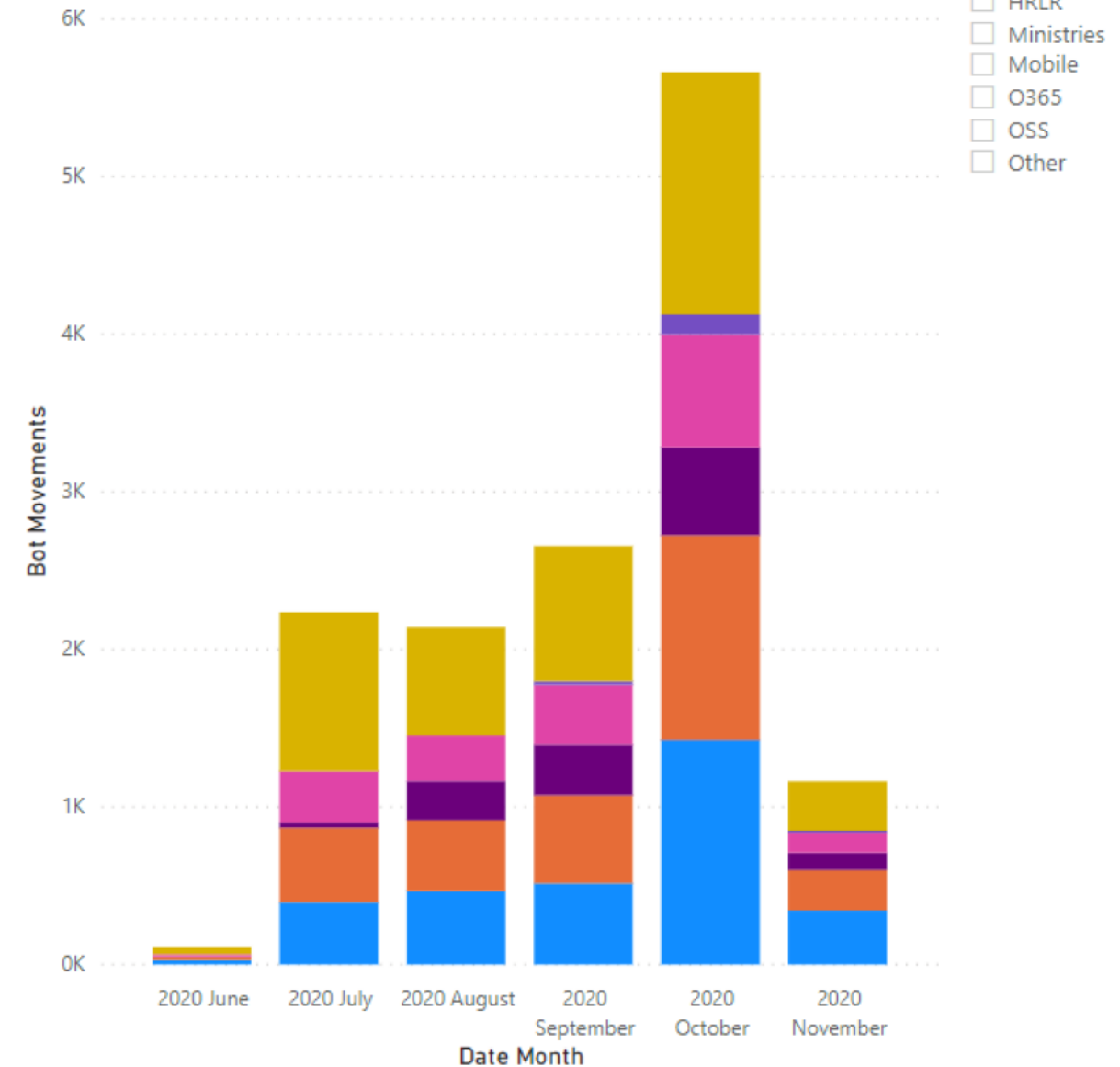
Communicate as much as possible, in as many way you can – more visibility means more interactions! (e.g., OPS Weekly, IT Service Announcement, OPS Working Remotely page, etc.)

7 Measurement



Bot Movements by Year, Month and Attribute

Attribute ● DS ● HRLR ● Ministries ● Mobile ● O365 ● OSS ● Other



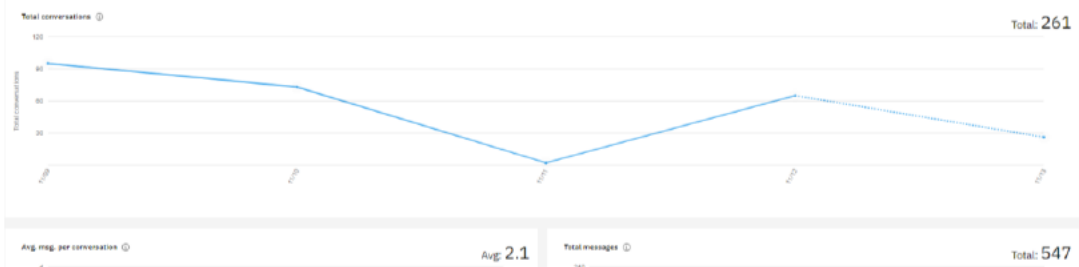
8

Ongoing Improvement: Conversation Reviews & New Content

Conversation Reviews

- The key to **maintaining** the bot is keeping record of what's been trained
- The key to **improvement** is reviewing use of the bot

NODE	Template ID	Source	OS Action	BOT	Topic	Question loaded	Answer
Wishing	HTP00000005506	Live Chat		0305	Slack	Wanting to book a Skype meeting, but the "Skype Meeting" button not showing in Outlook.	Try this
Account_Administration	HTP00000000337	Live Chat		Other	AD	Convert Shared Mailbox to Generic Login Account	Converting a shared mailbox to generic login account is done through the [ON]Request
Wishing	HTP00000001267	Live Chat		Other	VPN	what is the price difference between hard and soft VPN tokens?	asking for a cost estimate VPN has a one time activation or OAC 1.2 and the monthly recurring cost is \$55.84. The price is the same for both
Transfer	HTP00000005947	Live Chat		Other	AD	Can an employee transfer data when transferring ministries?	transforming employee data between ministries is no longer available due to a freeze on the disposition of government records. For more
Transfer	HTP00000005947	Live Chat		Other	AD	when a staff move's to another ministry do they lose shared drive access?	between ministries. If the staff message does not have a link to unsubscribe you can create a rule in Outlook. To quickly create a rule that moves all email I have not been trained for transfer questions. Please contact CDS
Wishing	HTP00000004309	Live Chat		365	Outlook	how to unsubscribe from emails	Contact Centre for information.
Wish...Transfer	HTP00000001647	Live Chat		055		I am having a hard time accessing hamster	Ordering of Kach's services is through
Ordering	HTP000000006037	Live Chat		Other	FacOps	I need to order FacOps	[ON]Request/Products/Services
Ordering	HTP000000006037	Live Chat		05		How do I request an IT Assistive Technology Assessment?	IT Assistive Technology support service requests are through the
Request_Documents	HTP00000001322	Live Chat		Other	VPN	how do I submit a ITAT30 request	SODO website/https://intra.mt.its.gov.on.ca/soda/ Go to Enterprise
Wishing	HTP00000001423	Live Chat		365	Teams	can you send me the GlobalProtect Soft Token Enrollment Guide	you can find the GlobalProtect Soft Token Enrollment Guide on Service
Wishing	HTP00000001423	Live Chat		365	Teams	I would like to know how much it cost to increase MS team capacity	Teams is set to a 300 limit. If you run out of space you should first
Account_Administration	HTP00000001334	Live Chat		Ministries		Need to request a new user account for the Ontario Together application	consider deleting files from the Files tab of the Teams. Select from the
Comparison	HTP000000028911	Live Chat		365	Dynamics	I'm looking understand the differences between the different Dynamics 365	I need to gather a few pieces of information from you so I can create a
Wishing_On_Off	HTP00000001231	Live Chat		05	WiFi	I'd like to enable my desktop computer for wireless use.	ticket for application support to process your request. You can request a consultation for Microsoft Dynamics 365 Online (GoCloud) through the [ON]Request



New Content

- The ability to add new content quickly and target the current "hot topic" is critical (e.g. COVID)

Eva 11:17

Welcome back Olive! I am Eva, your Enterprise Virtual Assistant.

What can I help you with today? Select one of the common topics, or type your question below.

If I don't know the answer, I will connect you with a Service Desk Analyst.

Top VPN questions

Working remotely

I have a question about Office 365

So, how do I ask Eva a question?

Eva 11:18

Select from the list, or ask your own question.

I need to order VPN

How much does VPN cost?

Does this user have VPN account?

Lost/replacement VPN token

VPN transfer to someone else

See more VPN topics

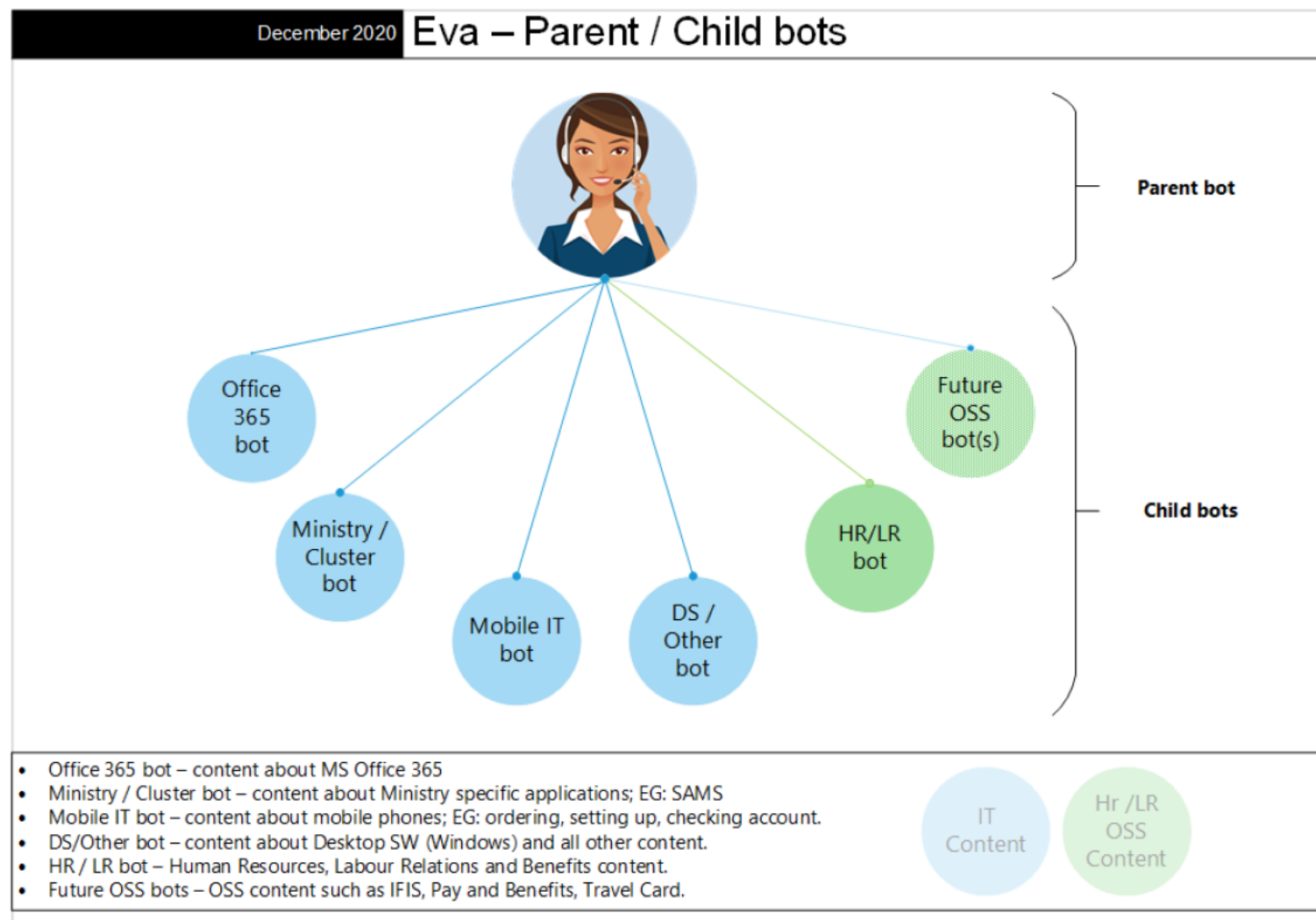
Type your message here



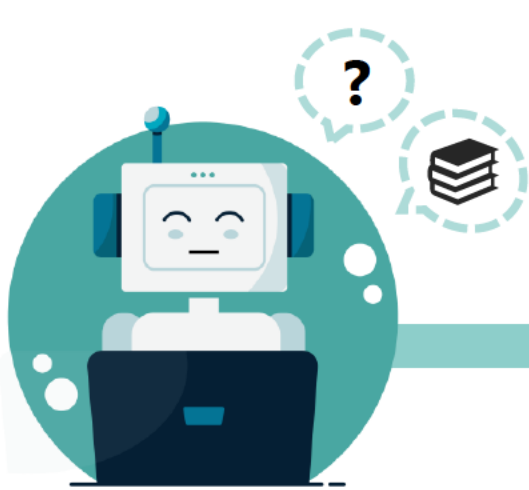
8 Ongoing Improvement: Growth

“Chatbots can have a finite amount of content before becoming less efficient”

- Through the pilot phase, initial launches and full release to the OPS (April 8, 2020), Eva was a single bot
- In June 2020, we divided the content of Eva into three child bots, based on volume of content per subject area
- In August 2020, we added a fourth child bot for Mobile IT
- The end user still has the experience of a single bot



Lessons Learned



Your chatbot will get stumped - updates are a constant and ongoing process



Be confident in your design & choose a visual identity that will resonate with your audience



Give your chatbot high visibility for increased interactions – how do you nudge people to leverage this channel?



Technology continues to move forward at a rapid pace – be ready to evolve and adapt

Eva Demo

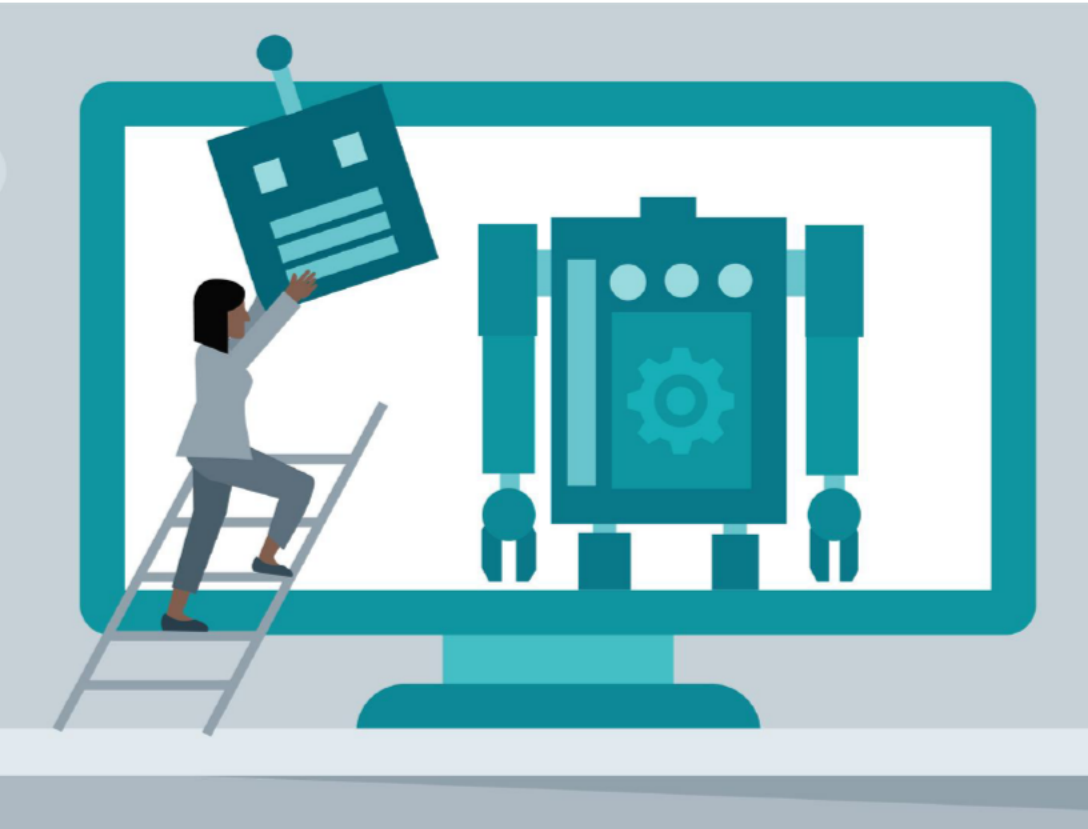
Introducing Eva, your Enterprise Virtual Assistant.



Content Demo

Adding new content to
your chatbot

Try it yourself - Build your own chatbot!



If you're interested, you can try building a chatbot bot for free:

Demo:

<https://watson-conversation-duo-dev.ng.bluemix.net/>

Build:

<https://www.ibm.com/cloud/garage/dte/producttour/create-chatbot-plan-trip>

Documentation:

<https://cloud.ibm.com/docs/services/assistant?topic=assistant-getting-started>



THANK YOU

We hope you enjoyed today's session.

Look out for the LearnIT Resources newsletter sent to all I+IT staff bi-monthly for upcoming learning and development opportunities.

The session survey link will be emailed to all participants and it is also available in the chat.